

# State of Marine Aviation

## The Deputy Commandant for Aviation provides his annual assessment of Marine aviation.

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Over four years ago, Task Force 58 launched an unprecedented 400-mile amphibious assault to secure an austere desert outpost deep in the heart of Taliban-controlled Afghanistan. Inspiring a nation still recovering from the 11 September 2001 terrorist attacks, Marines and their aircraft moved aggressively to establish the southern pincer critical to unhinging the Taliban defenses. Since then, both Active and Reserve Component (AC/RC) aviation units have flown over 200,000 combat hours in Afghanistan and Iraq while continuing to source routine deployment schedules to the Western Pacific and beyond. Such an extraordinary accomplishment is the result of the exceptional professionalism, resourcefulness, and commitment of our Marines. Whether I watch our aviation Marines at Al Asad, in the skies over Kandahar, or in the Horn of Africa, I stand in awe. Without a doubt, Marines today are shouldering the heaviest operational tempo since Vietnam with the same distinction as those who have gone before.

Yet we can ill afford to rest on our laurels in this long-term war against adversaries who routinely attack us by asymmetric means and attempt to exploit seams in our operational and tactical concepts. Nor can we let up in our daily battles at home to transform our force of aging platforms and equipment on schedule and within cost. Regardless of the complex and dynamic threats we face, our mission remains unchanged—to be the “A” in the Marine air-ground task force (MAGTF). Under this overarching resolve to develop and employ capabilities for the MAGTF, as Deputy Commandant for Aviation I have three priorities: sustaining the current fight, modernizing the force, and preparing for the long war.

### **Sustaining the Current Fight**

This past year Marine aviation flew over 94,000 combat hours, delivered over 1,060 precision-guided munitions, shot 1 million rounds, and performed over 800 medevac missions. In the Horn of Africa, Marine CH-53Es provided essential long-range capability for the joint task force charged with creating and maintaining stability in that region of the world. Marine Harriers and Cobras provided critical air support to U.S. and coalition forces, securing the establishment of a democratic government in Afghanistan. In Iraq, Marine aviation played a key role in the battle for Fallujah that set the stage for successful national elections. Beyond Operations IRAQI FREEDOM (OIF) and ENDURING FREEDOM, Marine air from Marine expeditionary unit deployments provided crucial relief for the victims of the recent tsunami in Southeast Asia as well as those ravaged by Hurricane Katrina along our own Gulf Coast. Marine aviation has never performed better.

This success was not without cost. Stress on our units, personnel, and equipment supporting the war is significant. Currently Marine helicopter squadrons, support squadrons, control groups, and Marine unmanned aerial system (UAS) squadrons are operating at a 1:1 turnaround ratio (i.e., 7 months in the continental United States for every 7 months deployed). Monthly hours logged on aircraft flying in-theater are doubling (or in some communities, almost

tripling) their respective peacetime planning allowance. Of the 38,000 Marines in aviation, over 30 percent are currently deployed overseas.

While hard-fought achievements in Iraq have created the conditions for a potential drawdown of U.S. ground forces, we can expect that aviation will continue to provide significant support to that country's democratization process in the foreseeable future. Marine aviation's ability to sustain combat operations in-theater over a long war will depend on our management of critical resources — manpower, materiel, and training.

Given the reduced deployment turnaround time of most aviation units, we are closely monitoring assignments to guard against driving Marines and their families from the Corps. In terms of materiel, we are streamlining aviation logistics to support over 1,200 aircraft in our inventory using concepts and processes already successfully utilized in industry. Lastly, we continue to promote relevant training opportunities, such as DESERT TALON exercises sponsored by Marine Aviation Weapons and Tactics Squadron 1, Marine Corps Air Station Yuma, to prepare our units for combat.

A common link between the manpower, materiel, and training necessary to sustain the fight is safety, placing a premium on day-to-day operational safety guarantees that we will save lives and preserve assets for tomorrow. Our mishap rate reflects this mindset as the rate continues its downward trend. We do not take this current safety record for granted but, rather, acknowledge that our future success will always hinge on making safety an integral part of everything we do. Based on this philosophy we continue to address leadership through two separate, yet complementary, processes in Marine aviation.

The first process simply involves promoting basic leadership at all levels of command that instills a sense of urgency toward ownership of a stronger safety record. While maintaining accountability through leadership does not justify fostering a culture of "zero defects," it does involve setting the standard and holding accountable those who violate it. The second concurrent process is the series of ongoing initiatives instituted by the Commandant of the Marine Corps (CMC) to assist aviation leadership in their pursuit of improving operational safety performance. For upper echelons of leadership, these programs include the Marine Aircraft Group (MAG)/Squadron Commanding Officer Course, the Aviation Command Preparation Program, and the Marine aviation monthly operational risk management report. For leaders at the unit level, we have revised the *Training and Readiness Manual* and the flying hour program to standardize command responsibilities and reporting. We have also recently reviewed all Marine aviation tables of organization (T/Os) to ensure that Operating Forces are structured and organized to support safe and effective operations. Beyond these initiatives, however, safety must first and foremost remain an established mindset that stems from the senior ranking aviator at Headquarters Marine Corps (HQMC) to the junior Marine turning wrenches on the flightline. Sustainment of our warfighting capabilities depends on it.

## **Modernizing the Force**

Higher deployment tempo and corresponding increased difficulty in maintaining over utilized legacy systems demand that we transition to our new aircraft and systems as planned and on schedule. Marine aviation is committed to the CMC's vision of an all-short takeoff and vertical landing (STOVL) force, and our roadmap for navigating through this challenge is the Marine Aviation Plan (AvPlan). Integral to the AvPlan are the numerous and critical transition task forces proactively planning our transition from 13 types of legacy aircraft to 7 new platforms.

Additionally, beginning in 2007 we will be implementing the Marine Aviation Transition Strategy, which is a phased, multiyear plan incorporating force structure changes to better balance the AC and RC capacity while simultaneously providing critical T/O manpower increases to all flying squadrons and selected sections of the MAG and Marine aircraft wing (MAW) headquarters.

Another component of our modernization plan is the Marine aviation training system program. This is a priority-funded program that will provide a systems approach to a training driven curriculum and will facilitate a true currency management process within Marine aviation. This process will keep our training systems current with our aircraft and includes the ability to rapidly update both courseware and training devices. This program will allow us to capitalize on more effective and standardized training both in the aircraft and in the simulator. Crew resource management (CRM) will be an integral part of this new effort. CRM will no longer be a class given once a year but will be woven throughout the fabric of the curriculum. CRM will be evaluated in each training event and that information will be used to determine trends and stop problems before they occur. And most importantly, newly established aviation training system sites will provide MAWs and MAGs with a cadre of instructors dedicated to standardized instruction and performance evaluation.

A final component of modernization will be the direct involvement of Marine aviation within the naval aviation enterprise (NAE). The purpose of the NAE is to provide communications and action between Naval Air Systems Command (NavAir), the Operating Forces, and resource sponsors to identify, validate, and support Operating Forces requirements and sustain readiness. Based on this charter, NAE is a comprehensive resource for analyzing and integrating better business practices within naval aviation that generate process improvements and efficiencies. Marine aviation's participation in NAE and its associated readiness and cost assessments will provide process improvement recommendations from which our maintenance and supply operations could benefit. We are working closely with VADM Walter B. Massenberg at NavAir and VADM James M. Zortman, Commander, Naval Air Forces (CNAF), to better integrate Marine aviation into the NAE.

This broad overview of our modernization plans becomes clearer upon review of our major programs. The collaborative efforts of Marine forces, HQMC, NavAir, and industry are largely responsible for the impressive achievements of many of our major programs over the past year. The status of these programs, platforms, and initiatives is outlined below.

**Tactical aviation (TacAir).** The F-35B STOVL Joint Strike Fighter (JSF) is critical for attaining the vision of an all-STOVL fleet within expeditionary maneuver warfare (EMW). Replacing the AV-8B and the F/A-18, STOVL JSF will have a very low radar cross section and provide superior air-to-ground and air-to-air capabilities over legacy aircraft. In its fourth year of development, the program is currently in the system development and demonstration (SDD) phase, and its critical design review was held in February. Another major program milestone was reached in February when the first conventional takeoff and landing (CTOL) variant rolled off the assembly line. The CTOL JSF is scheduled for its first flight this fall, and the STOVL variant is still on track for its first flight in 2007, with initial operational capability (IOC) anticipated in 2012.

The EA-6B Prowler continues to maintain an extremely high deployment tempo supporting operations against growing and diverse threats in the global war on terrorism (GWOT). Ongoing structural improvements and the planned Improved Capabilities III upgrades have extended the aircraft's service life and will deliver increased capability. We are currently examining alternatives to accomplish the future airborne electronic mission, to include the capabilities of the JSF and UASs.

**TacAir integration (TAI).** Marine aviation aboard carriers is not new. We have been deploying with the Navy since 1931. While our support priority will always be to the MAGTF, we will continue to go to war with carrier aircraft wings in the foreseeable future. In November 2005 I signed a memorandum of agreement with VADM Zortman at CNAF establishing capabilities-based scheduling (CBS) as the new scheduling construct for TAI. CBS integrates all 56 Navy and Marine AC TacAir squadrons into a common Department of the Navy scheduling process to fill operational and training requirements with the most appropriate units while balancing

operational tempo across the force. Several studies are ongoing to determine the appropriate Marine Corps/Navy aviation structure and JSF aircraft variant mix to support TAI in the future.

**Assault support.** I recently attended the standup of Marine Medium Tiltrotor Squadron 263 (VMM-263). The Assistant Commandant of the Marine Corps, Gen Robert Magnus, presided over the ceremony. With retired Lt. Gen Fred McCorkle in the audience, he noted the sacrifices in precious human lives and material resources that made the Osprey introduction possible. I remember working with then-Maj Magnus and then-Lt. Col McCorkle as the Osprey was being born, and to be with both of them at the standup was special. But it took too long to bring the aircraft into the fleet. We need to do better with how we introduce such critical systems. Thanks to Col. Glenn M. "Bluto" Walters and the Marines of Marine Tiltrotor Test and Evaluation Squadron 22, the Osprey has passed operational evaluation (OpEval) with exceptional performances and is in full-rate production. VMM-263 will go to war next year, fully handling the vision seen by Gen. Magnus and others over 20 years ago.

The CH-53E continues to be the workhorse of the MAGTF. It is a great aircraft, and I love flying it. But the Super Stallion will begin reaching the end of its fatigue life during this decade. A capability upgrade is required to effectively meet MAGTF and joint warfighting requirements over the next 25 years. For this reason, the CH-53K (formerly CH-53X or heavy lift replacement) is a critical acquisition priority for Marine aviation. The CH-53K is a derivative design of the existing CH-53E, remaining within the same shipboard footprint while providing over twice the lift capability to ship-to-objective maneuver (STOM) distances as well as reliability, maintainability, survivability, and cost of ownership improvements. The program received full funding in December 2005 after successfully achieving "Milestone B" status—initiation of SDD. The CH-53K is scheduled for OpEval in 2015, and its subsequent IOC will vastly improve the ability of the MAGTF and joint force to project and sustain forces ashore from a seabase in support of EMW, STOM, and distributed operations.

In February 2005 the KC-130J attained IOC. The aircraft has been continuously deployed in support of OIF since IOC and has provided the warfighter a state-of-the-art, multi-mission, tactical aerial refueling, and fixed-wing assault support asset that has performed beyond expectations. To date 21 KC-130Js have been delivered to the Marine Corps. 2d MAW has completed its transition, 3d MAW will receive its 12th aircraft by the end of 2006, and 1st MAW remains on schedule to receive its first aircraft in 2007. The Marine Corps inventory objective is 51 KC-130J aircraft in order to replace its aging KC-130F/Rs. We must continue to procure KC-130Js.

No community is stressed more or gives better support to the MAGTF than the light attack helicopter (HMLA) community. It is critical that we replace the 30-plus-year-old UH-1N and upgrade the AH-1W. We will begin replacing the UH-1N in fleet units in fiscal year 2008 with AH-1W upgrades following.

**UASs.** Introduced in 1986 as an interim system, the Pioneer UAS has flown over 13,000 hours since 2003 (10 times the peacetime rate). We will sustain and add to the current fleet. Given the growing utilization of UAS as a force enabler, the Marine Corps' Tier 3 UAS strategy is to pursue a competitive acquisition program for the vertical UAS. We must devote more resources to this capability and increase the mission sets accomplished by UAS.

**Marine aviation command and control system (MACCS).** No discussion of air support in Iraq ever occurs in the joint environment without reference to our success in aviation command and control (C2). The often-used quote is, "the Marines have it right." We must continue to "get it right." MACCS units continue to support the war superbly; however, legacy aviation C2 systems continue to experience challenges in supportability, obsolescence, and capability. In 2008 the common aviation C2 system (CAC2S) will begin to replace the current MACCS C2. Eventually CAC2S will become the "motherboard" of MAGTF C2, fusing real-time, non-real-time, and near-real-time data from sensors and weapons systems into a single integrated display. These sensors include the ground/air task-oriented radar and highly

expeditionary long-range air surveillance radar that will improve battle space surveillance capability against cruise missiles, UASs, aircraft, and theater ballistic missiles. The complementary low-altitude weapons system, scheduled to reach IOC this year, will extend force protection beyond visual range using advanced medium-range air-to-air missiles. Successful integration of these sensors and weapons systems using CAC2Ss will ensure that aviation is not only integrated into MAGTF operations but that the MAGTF is also integrated with joint and combined forces.

**Aviation logistics and aviation ground support.** Our Marine aviation logistics squadrons and Marine wing support groups have been major force enablers in the GWOT. However, just as we are transforming to new aviation systems, we must also transform our methods to better facilitate effective and agile combat support needed to maintain our readiness in the future. The key pillars of this modernization effort are MAGTF logistics integration, NAE AIRSpeed,<sup>1</sup> and the Marine Aviation Logistics Support Program II. Each of these programs is designed to integrate 21st century business and supply chain practices with established processes to optimize support to the aviation combat element.

**Aircraft survivability equipment (ASE).** Through the hard work of our Navy and Marine Corps aviation maintenance teams and contractors, every Marine helicopter in OIF today supports combat operations with an upgraded ASE suite. All assault support aircraft deployed to the Central Command theater are equipped with the "V2" upgrade of the AAR-47 missile and laser warning set and the new ALE-47 countermeasure dispensing systems. AH-1W, UH-1N, and KC-130 aircraft have received the more advanced APR-39AV2 radar detection system. All AH-1W aircraft deployed with HMLAs in-theater have received advanced infrared (IR) suppression kits to reduce IR signature. CH-53E aircraft are outfitted with interior ballistic armor and wield new ramp-mounted GAU-21 .50 caliber machineguns. Lastly, CH-46E aircraft are armed with ramp-fired M240 7.62 caliber machineguns and are equipped with lightweight armor and lightweight armored cockpit seats.

Of the 650 helicopters in the Marine Corps inventory, 78 percent are currently modernized with upgraded ASE. Every aircraft is fully funded to receive these upgrades, and we are projected to be complete by 2007. There is no higher priority.

## **Preparing for the Long War**

We are positioning Marine aviation to more effectively support the MAGTF in fighting the long war. My predecessor, Lt. Gen. Michael A. "Hawg" Hough, USMC(Ret), created the aviation transition strategy I noted earlier. The strategy is an enabler to keeping Marine aviation healthy as we reshape Marine aviation overall. Now we must rebalance Marine aviation to reflect a greater emphasis on intelligence, surveillance, and reconnaissance; generate even more robust and agile C2; and make our precision attack and maneuver even more effective. Underlying these critical capabilities will be increased readiness and force protection integrated into all Marine aviation systems and concepts. The AGILE LION demonstration conducted in Yuma this past December is a prime example of blending cutting-edge technologies with current capabilities to develop a more net-centric air-ground team with a clearer real-time operational picture necessary to be successful. We are going to be in the fight for a long time, and we must be prepared.

## **Conclusion**

The Marine Corps has a heritage of fighting battles and winning wars while simultaneously supporting routine deployment cycles and transforming the force. The achievements of Marines beyond their operational commitments during Nicaragua, Korea, and Vietnam confirm this fact. Today is no different. My pride in the accomplishments of Marine aviation past and present is only exceeded by my confidence that we are poised to meet our

future challenges. Marine aviation will always remain a viable and lethal instrument for the MAGTF—its thunder and lightning. “Fly right.”

**Note**

1. NAE AIRSpeed is a cultural change affecting administrative, non-production, technical functions of research and development, test and evaluation, acquisition, and corporate operations processes within NavAir.